



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/606,476	06/26/2003	Richard C. Brown	STL11197	5647
27365	7590	02/08/2006	EXAMINER	
SEAGATE TECHNOLOGY LLC C/O WESTMAN CHAMPLIN & KELLY, P.A. SUITE 1400 - INTERNATIONAL CENTRE 900 SECOND AVENUE SOUTH MINNEAPOLIS, MN 55402-3319			RENNER, CRAIG A	
			ART UNIT	PAPER NUMBER
			2652	

DATE MAILED: 02/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/606,476

Applicant(s)

BROWN ET AL.

Examiner

Craig A. Renner

Art Unit

2652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 8-17 and 25-32 is/are pending in the application.
- 4a) Of the above claim(s) 5, 6, 8, 9, 14-17, 27, 28, 30 and 32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 10-13, 25, 26, 29 and 31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 June 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>6/26&11/3/03&5/12/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of "Species I - FIGS. 1-2," upon which "claims 1-4, 10-13, 25-26, 29 and 31" are said to be "readable thereon," in the reply filed on 17 November 2005 is acknowledged. Accordingly, claims 5-6, 8-9, 14-17, 27-28, 30 and 32 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to one or more non-elected inventions/species, there being no allowable generic or linking claim.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include one or more reference signs not mentioned in the description. Note, for instance, "108-2" (shown in FIG. 4, for instance), "102-6" (shown in FIG. 6, for instance), "108-3" (shown in FIG. 6, for instance), "102-7" (shown in FIG. 7, for instance), "132-7" (shown in FIG. 7, for instance), "140-3" (shown in FIG. 7, for instance), "132-8" (shown in FIG. 8, for instance), "108-9" (shown in FIG. 9, for instance), "132-9" (shown in FIG. 9, for instance), and "102-10" (shown in FIG. 10, for instance).

Corrected drawing sheets in compliance with 37 CFR 1.121(d) and/or an amendment to the specification in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended

Art Unit: 2652

replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informalities:
 - a. In line 22 on page 5, "head portion 108" should be changed to --head portion 108-1-- in order to be consistent with that shown in FIG. 3.
 - b. In line 13 on page 8, "disc 102" should be changed to --disc 102-8-- in order to be consistent with that shown in FIG. 8.
 - c. In line 5 on page 10, "FIG. 7" should be changed to --FIG. 8-- in order to be consistent with the figure showing "electro-magnet 170."
 - d. In lines 6-7 of claim 10, "the data storage disc" should be changed to --the data storage disc-- in order to more clearly refer back to that set forth in line 3 of claim 10.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 2, 4, 25 and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Congdon et al. (US 6,359,759).

With respect to claims 1, 2, 4 and 25, Congdon teaches a head suspension assembly comprising a suspension portion (includes 310, for instance) including a suspension arm (310); a head portion (includes 390, for instance) coupled to the suspension arm (as shown in FIG. 6, for instance) including one or more transducer elements (lines 18-19 in column 3, for instance); and a magnetic bearing element (includes 360, for instance) on the head portion or suspension portion (as shown in FIG. 2 or FIG. 5, for instance) to form a magnetic bearing assembly in combination with a conductive element (340) operable to induce a repulsion force (F_m) [as per claim 1]; wherein the magnetic bearing element includes at least one bearing magnet (includes 360 and 380, for instance) [as per claim 2]; wherein the at least one bearing magnet includes an electro-magnet (includes 360 and 380, for instance) [as per claim 4]; and wherein the magnetic bearing element is on the head portion (as shown in FIG. 5, for instance) [as per claim 25].

With respect to claim 31, Congdon teaches a magnetic bearing element (includes 360, for instance) on a slider or head (as shown in FIG. 5, for instance) orientated to provide a repulsion force (F) relative to a conductive layer or magnetic bearing element (includes 340, for instance) on a data storage disc or media (as shown in FIG. 5, for instance, i.e., a media).

6. Claims 1-4, 10-13, 25-26, 29 and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Goor (US 4,814,907).

With respect to claims 1-4 and 25, Goor (US 4,814,907) teaches a head suspension assembly (includes 54 and 56, for instance) comprising a suspension portion (includes 56, for instance) including a suspension arm (56); a head portion (includes 54, for instance) coupled to the suspension arm including one or more transducer elements; and a magnetic bearing element (includes 58, for instance) on the head portion or suspension portion (as shown in FIG. 5B, for instance) to form a magnetic bearing assembly in combination with a conductive element (includes 64, for instance, lines 11-16 in column 7, for instance) operable to induce a repulsion force (lines 11-16 in column 7, for instance) [as per claim 1]; wherein the magnetic bearing element includes at least one bearing magnet (line 14 in column 7, for instance) [as per claim 2]; wherein the at least one bearing magnet includes a permanent magnet (line 10 in column 7, for instance) [as per claim 3]; wherein the at least one bearing magnet includes an electro-magnet (lines 65-66 in column 6, for instance) [as per claim 4]; and

Art Unit: 2652

wherein the magnetic bearing element is on the head portion (88, as shown in FIG. 11, for instance) [as per claim 25].

With respect to claims 10-13, 26 and 29, Goor (US 4,814,907) teaches a bearing assembly comprising a data storage disc or media (66) having a recording layer (62) and a magnetic bearing element (64); and a magnetic bearing element (58) on a slider or suspension portion (56) and the magnetic bearing elements on the data storage disc or media and the slider or suspension portion including a bearing magnet (line 14 in column 7, for instance) and a conductive element (lines 11-16 in column 7, for instance) to provide a repulsion force between the slider or suspension portion and the data storage disc or media (lines 11-16 in column 7, for instance) [as per claim 10]; wherein the bearing magnet is a permanent magnet (line 10 in column 7, for instance) [as per claim 11]; wherein the bearing magnet is an electro-magnet (lines 65-66 in column 6, for instance) [as per claim 12]; wherein the bearing magnet is formed on the slider or suspension portion (as shown in FIG. 5B, for instance) and the disc or media includes a conductive layer (64, lines 11-16 in column 7, for instance) or substrate to form the conductive element (as shown in FIG. 5B, for instance) [as per claim 13]; wherein the magnetic bearing element is on the slider (88, as shown in FIG. 11, for instance) [as per claim 26]; and wherein the magnetic bearing element on the data storage disc or media is a conductive layer (64, lines 11-16 in column 7, for instance) [as per claim 29].

With respect to claim 31, Goor (US 4,814,907) teaches a magnetic bearing element (90) on a slider or head (88) orientated to provide a repulsion force relative to a conductive layer or magnetic bearing element (64) on a data storage disc or media (66).

Claim Rejections/Considerations - 35 USC § 103


7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Craig A. Renner whose telephone number is (571) 272-7580. The examiner can normally be reached on Tuesday-Friday 9:00 AM - 7:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, A. L. Wellington can be reached on (571) 272-4483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Craig A. Renner
Primary Examiner
Art Unit 2652

CAR